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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,459	12/10/2003	Dan Teodosiu	4031	8789

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EXAMINER

LY, CHEYNE D

ART UNIT PAPER NUMBER

2168

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,459

Applicant(s)

TEODOSIU ET AL.

Examiner

Cheyne D. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 24-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 1, 14, and 31 is/are objected to.
- 8) ☒ Claim(s) 1-33 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/14/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-23 and 31-33, drawn to a computer-readable medium having computer-executable instructions, comprising retrieving **meta-data** of a resource, comparing fence values, and updating the second machine, classified in class 707, subclasses 100, 203, and 204.
 - II. Claims 24-30, drawn to a method for replicating data, comprising loading data into a first machine, marking the data with a fence value, and synchronizing, classified in class 707, subclasses 203 and 204.
2. Inventions of Groups I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because Group II does not require the meta-data of a resource. The subcombination has separate utility such as the manufacturing of new personal computers having the same installed software.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their divergent subject matter, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Albert Michalik (Reg. No. 37, 395) on June 23, 2006, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-23 and 31-33. Affirmation of this election must be made by applicant in replying to this Office action.
5. Claims 24-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
7. Claims 1-23 and 31-33 are examined on the merits.

OBJECTIONS

8. Claim 1, line 4, recites the term “resides.” Applicant is advised to amend the term to “reside” because said term has been interpreted as being directed to “meta-data and content”.
9. Claim 14 is objected to because of the inclusion limitations in parenthesis. For example, line 2 recites the limitation of “(itself+1) and (a clock time).” Appropriate correction is required.
10. Claim 31, line 3, recites “a second set of resource.” Applicant is advised to amend the term “resource” to “resources” to be consistent with the rest of the claim language.

11. Claim 31, line 9, recites the phrase “by both.” Applicant is advised to amend the phrase “by both **machines**”.
12. Claim 31, line 14, recites “the resource on the one machine.” Applicant is advised to amend the term “on” to “**from**.”

CLAIM REJECTIONS - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claims 1-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory algorithm type subject matter.
15. Claims 1-23 are rejected because said claims are directed to a computer-readable medium which embodies data signal such as a carrier wave (page 8, lines 6-17). Wave carriers are not suitable computer-readable media under 35 U.S.C. 101. Therefore, the claimed invention as directed to the embodiment of “carrier wave” is nonstatutory.
16. In regard to claims 1-23, said claims are directed to computer-executable instructions with a determining step and a set of conditional statements. In one interpretation, when the conditions in the if statements are met, the computer-executable instructions result in the “preventing propagation...” and “updating the second resource...” Alternatively, when the conditions in the if statements are not met, the computer-executable instructions do not produce any tangible, concrete, useful results. Therefore, claims 1-23 are nonstatutory because said claims comprise an embodiment which does not produce any tangible, concrete, useful results.

Claim Rejections - 35 USC § 112

17. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

18. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

19. Claim 1, line 11-15, recites “updating the second machine” which cause said claim to be vague and indefinite because said claim is not clear as to what is being updated. For example, lines 3-7 recite “meta-data of a resource”, “the resource having meta-data and content that resides on each machine”, and “one or more values that are updated”. Therefore, it is not clear if the updating is performed on the resource, meta-data, or values. Claims 2-15 are rejected for being dependent from claim 1. Clarification of the metes and bounds of the claims is required.

20. In regard to claim 14, the limitation of “setting one of the fence values to a maximum of (itself+1) and (a clock time)” causes said claim to be vague and indefinite because it is not clear whether said fence values are set based on “(itself+1) and (a clock time)” individually or in combination.

21. Claim 31, line 7, recites the limitation of “a resource on another machine independently from other meta-data” which causes said claim to be vague and indefinite. For example, claim 31 recite an open limitation of “comprising” wherein said claim recites “a first machine” and “a second machine.” Therefore, claim 31 is not clear as to whether the limitation of “another machine independently form other meta-data” is directed to “a

second machine” or another unspecified machine that is encompassed by the “comprising” language. Claims 32 and 33 are rejected for being dependent from claim 31.

Claim Rejections - 35 USC § 102

22. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

23. Claims 1-11, 13, and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Williams et al. (US 20030079100A1) (Williams hereafter).

CLAIM INTERPRETATIONS

24. Claim 1 recite the limitations of “if..., updating”, wherein the limitations have been interpreted as a conditional statement wherein the steps following said statement are only performed when the specified condition has been met. Or the steps are not performed when said condition has not been met. Therefore, the steps following the conditional statement have been interpreted as being optional. Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed. (see MPEP 2111.04 [R-3]).

PRIOR ART

25. In regard to claim 1, Williams discloses a computer-readable medium having computer-executable instructions, comprising:

- a. Retrieving meta-data of a source that is replicated on a plurality of machines (page 3, [0035]), especially, “move data...across storage devices”, and page 6, [0062], especially the disclosure of “each node...is a separate CPU and associated circuitry...”), the resource having meta-data and content that resides on each machine on which the resource is replicated (page 3, [00334]), the meta-data including one or more values that are updated whenever the content of the resource is changed via any local update (page 6, [0062], especially, “fence keys are a mechanism in which metadata updates within a process...”, and page 7, [0070]) and a fence value that is independent of any local changes to the content (page 7, [0069]);
- b. Comparing a first fence value of the content on a first machine of the plurality of machines with a second fence value of the content of a second machine of the plurality of machines (page 7, [0074] to [0075]);
- c. If the first fence value is of higher precedence than the second fence value, updating the second machine. As discussed above, the instant limitation of “updating the second machine” has been interpreted as an optional.

26. In regard to claim 2, Williams discloses the meta-data is stored in a separate from the content (page 2, [0026], and Figures 5-6 and accompanying description).
27. In regard to claims 3-5, 9, and 10, the further limits the limitation recited in the “if, the...” which has been interpreted as optional as discussed above.
28. In regard to claim 6, Williams discloses the content comprise file data and file attributes (page 2, [0026]).

29. In regard to claim 7, Williams discloses each metadata on each machine comprises a digest that summarizes the resource (Figures 5-6 and accompanying description).
30. In regard to claim 8, Williams discloses comparing the digests of the meta-data on the machines (page 7, [0074] to [0075]) and bypassing updating if the digests are equivalent (page 7, [0075]).
31. In regard to claim 11, Williams discloses each value is assigned to a portion or portions of its respective resource (page 6, [0065 to [0069]).
32. In regard to claim 13, Williams discloses content with a certain value is invisible to other machines (page 7, [0070], especially, “locks out the other process from further access to the storage device”, and [0076], especially, “the second process...be denied access to the storage device”).
33. In regard to claim 14, due to the vague and indefinite issued discussed above, the claim has been interpreted reasonably broad. Therefore, Table 5 described by Williams has been interpreted to anticipate said claim.

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

36. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (US 20030079100A1) (Williams hereafter) as applied to claims 1-11, 13, and 14 above, and further in view of Shakib et al. (US005787262A) (Shakib hereafter).

CLAIM INTERPRETATIONS

37. Claim 31 recites the “if..., updating...; otherwise updating the resource on the machines based on data other than the fence values.” For the instant rejection, the claim has been construed wherein the if condition has not been met. Therefore, the “updating the resource on the machines based on data other than the fence values” is otherwise performed.

MOTIVATION TO COMBINE

38. Shakib describes an improvements for conflict resolution without substantially increasing the communication traffic on the network (column 3, lines 10-19). While, Williams describes a need to over the danger of two processes attempting to update metadata associated with a particular allocation unit simultaneously, causing data corruption (conflict) (page 1, columns 1-2, [0005]). An artisan of ordinary skill in the art at the time of the instant invention would have been motivated by Shakib to improve the method of Williams with conflict resolution to increase the communication traffic on the network.

PRIOR ART

39. In regard to claim 31, Williams describes all of the limitations to said claim, except for the limitation of “updating the resource on the machines based on data other than the fence values”. Shakib describes updating the resource on the machines based on data other than the fence values (column 4, lines 34-45). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the system of Williams with updating described by Shakib to increase the communication traffic on the network.

40. Dependent claims 32 and 33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and 35 U.S.C. 103(a) directed to the base claim 31, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

CONCLUSION

41. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance.

Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within

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5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

42. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716.

The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

44. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571)272-3642.

C. Dune Ly / 
Patent Examiner
8/6/06